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ABSTRACT

This paper on electronic books (e-books) in the academic library begins by defining the e-book and presenting general information on developments in the e-book industry, including collections of e-books that are accessed through the Internet and electronic editions of print books that can be downloaded to a proprietary reading device. A list of e-book reading devices, along with links to their World Wide Web sites, is included. NetLibrary, an online e-book collection that is enjoying popularity in all types of libraries, is described. The problems and challenges that the e-book presents to a university library are addressed, including circulation, readability, bibliographic control, and administrative problems. The LSTA (Library Services and Technology Act)-funded Electronic Book Evaluation Project is summarized. (Contains 14 references.) (MES)

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Ebooks in the Academic Library

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1

E-books are in the news-new developments, new companies, new mergers, and new technology. The Association of American Publishers predicts that in five years, 28 million people will be using electronic devices to read books. Microsoft predicts that during the next year over 1 million ebooks will be available. (Peek 46,48) Just what does this mean to libraries, in particular, what is the future of the ebook in an academic library? To explore this topic, we will first define the ebook along with some general information on developments in the ebook industry; then we will present netLibrary, an ebook collection that is enjoying popularity in all types of libraries; and finally a look at the problems and challenges that the ebook presents to a university library.

Perhaps we should define exactly what is an ebook, but that is difficult because what we call an ebook is constantly evolving. According to the Association of American Publishers, an ebook is " a Literary Work in the form of a Digital Object consisting of one or more standard Unique Identifiers, Metadata, and a Monographic body of content, intended to be published and accessed electronically." In simpler terms, an ebook is a print book whose text/content is made available electronically. Although we think of the ebook as very recent development, we can trace its beginning back thirty years to when Michael Hart typed the Declaration of Independence and sent it over the Internet-the birth of Project Gutenberg, <http://www.gutenberg.net/> the source of over 3000 free ebooks of classic literature in the public domain. Of course, it could be argued that this is an etext, rather than an ebook. An interested reader can now search a database of more than 13,000 free ebooks at the Online Books Page from Jon Mark Ockerbloom, <http://digital.library.upenn.edu/books/>. And for those who say, no one will ever read an online book, the Etext Center at the University of Virginia has made available 1200 free texts which can be downloaded to a PC or handheld device using Microsoft reader software. From August 8 to December 31, 2000, this center has shipped 1, 391, 263 ebooks to readers in over 100 countries. According to David Seaman, director of the center, the Etext Center is accessed 90,000 times each day. (Electronic Text Center) Perhaps part of the popularity of these etext titles is the cost---free.

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The second major ebook development to evolve is the electronic edition of a print book that can be downloaded to a proprietary reading device such as a hand held device or a PC. The most popular two readers have been the Rocket ebook and the Softbook. Bought by Gemstar, these readers have been replaced by the RCA Reb 1100 and Reb 1200. After buying a pricey reader, for anywhere from $200 to $3,000, the reader then purchases an ebook from a number of retailers including Barnes and Noble and Amazon, and then downloads it to his/her reader. Each company has its own set of enhancements such as searching, changing fonts, annotating, and reference tools for its ebook readers. And each reader varies as to battery life, storage space, and other features. What they all have in common is that the books, once downloaded, may only be read by one particular reader. Despite the problems that this might present for a library, public libraries have been experimenting with ebook/readers, and they have had an enthusiastic response from library patrons who can check out an ebook reader loaded with maybe a dozen titles. A few academic libraries have also enjoyed success with ebook/readers. Nancy Gibbs at

North Carolina State University has initiated an ebook project which includes the Rocket ebook and Soft Book. Information about this program is available on the Library's web pages at <http://www.lib.ncsu.edu/colmgmt/ebooks/>. These ebooks/readers do have some advantages over the print.

- Carry your personal library with you--great for textbooks.
- Permanency - books cannot be damaged or chewed by dogs
- Read where you're most comfortable desk, couch, bed, bus, train, plane--the reader even includes its own lighting.
- Includes extras such as highlighting, bookmarks, notes, drawings, text searches, built-in dictionaries, instant large print, audio.

But most people have found nothing wrong with the old-fashioned format of the book; besides, it is less expensive. The following is a current listing of ebook reading devices including links to their home pages where you can access further information. For hints on which hardware device is more suited to your lifestyle, visit the *eBook Hardware Buying Guide* web site by Glenn Sanders and Wade Roush, posted on Thursday, November 30, 2000 at http://www.ebooknet.com/printerVersion.jsp?id=4252.

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The future place of ebooks is certain, but what will an ebook be in five or ten years with the coming developments in e-ink and e-paper and wireless technology. Will ebooks be subject to levels of control and restrictions that go beyond what we expect for print books? (Lynch) Will ebooks, freed from the constraints of the physical format of the printed book, evolve into something new? And what effect will this have on literature, communication of ideas, storytelling. For a glimpse into a possible future, there are ebooks on the Internet that have never appeared in print-some, experimental in form and content, relying on images and interactivity with the reader.

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Paraphrasing Keith Devlin, dean of science at St. Mary's College of California--quoted in the Washington Post, April 25. We may be moving toward a generation that is cognitively unable to acquire information efficiently by reading a paragraph. They can

read words and sentences--such as bit of text you find on a graphical display on a Web page--but they are not equipped to assimilate structured information that requires a paragraph to get across.....it is not surprising that the medium for acquiring information that college students find most natural is visual nonverbal: pictures, video, illustrations and diagrams. ... The shift from printed text to digitized text is affecting libraries in many ways, and it is difficult to predict just where these changes are leading or what the final impact will be on the future of the book and the library. Many academic libraries have chosen NetLibrary to begin this journey.

Middle Tennessee State University Library offers a shared collection of electronic books (eBooks) to its faculty, staff, and students using netLibrary, a distributor of eBooks through the internet. MTSU participates in the netLibrary Shared Collection program administered by the Southeastern Library Network (SOLINET) which includes 10,690 volumes in its Library Collection. Also available free of charge is a large Public Collection of 4000 public domain eBooks. Libraries belonging to this program share access to all of the available titles. SOLINET maintains ownership of the electronic books in the shared collection in perpetuity. Academic libraries pay SOLINET an access fee based upon their full time equivalent (FTE) enrollment. A reserve account is earmarked for purchasing multiple copies of titles accessed frequently.

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Search results are displayed in order of relevancy unless otherwise indicated in the Power Search and Command Search options. A maximum of 300 search results are returned.

The brief record display is the default. A long record display with linked subject headings can also be selected from the Power Search option.

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netLibrary's recent business acquisitions show the company expanding their focus to include offering electronic textbooks, marketing individual titles directly to consumers, printing books on demand, and printing short run titles on demand.

Offering netLibrary has been an excellent way for MTSU Library to introduce computer savvy students, faculty and staff to the convenience of electronic books without the need to acquire and manage the use of expensive hand held readers. Integrating electronic books into an academic library collection is not without problems and concerns. The nature of the ebook has raised issues regarding circulation, readability, and bibliographic control.

In the academic library environment, there is a propensity of reference books and technical books, both of which are well-suited for the electronic format, a fact pointed out by Jack O'Gorman in a recent review of netLibrary (O'Gorman, 2001). Electronic books are a convenient format for reference tools - a patron can search the scope of a book, access the content to get pertinent information, and return the book. O'Gorman points to the success of *The Oxford English Dictionary* and *Encyclopaedia Britannica* in electronic formats as evidence of this. Technical books are especially well-suited for the electronic format because they become outdated quickly and are hard to keep in the library because of high demand. The online version of Elsevier Science's *New Encyclopedia of Industrial Chemistry* slated for released in September 2001 will feature hyperlinked indexes, cross references, and bibliographic links to abstracts and full texts where available (Wilkinson, 2000). Industry experts predict that electronic versions will grow to dominate the book industry, due to the increasing array of features unavailable in print and the increased flexibility in updating multi-volume reference works.

The advantages of electronic books are significant - rapid delivery to patrons, elimination of printing and distribution costs, reduced "processing" before they go into circulation, and easy replacement if lost or damaged. Furthermore, concerns about missing pages or highlighting within the text by other patrons are eliminated; storage space is minimal, and type can easily be enlarged. Already, there is a certain amount of versatility in this format. E-books can be downloaded from booksellers to be read from desktop or laptop computers, or there are battery powered readers - handheld devices designed for storing and reading e-books. In spite of the advantages, however, the

e-book format is not quite the perfect medium. Let us look briefly at some of the problems encountered by academic libraries with electronic books.

Circulation Problems

Many academic libraries have encountered problems in circulating electronic books. Jack O'Gorman's review of netLibrary, pointed out some limitations that may not represent the best interests of the patron. First, the checkout status is dependent upon the library's access to the vendor. In other words, a library may have only one user per book at a time, unless the library has purchased multiple copies of a title.

Additional problems have been encountered with (usually brief) checkout times. Circulation periods for e-books range from a few hours to as long as two weeks. If a patron is unable to finish a book within the allotted time period, he would have to return the book and check it out again, hoping that it was still available. Coupled with the (often

considerable) download time, this could make an e-book far less attractive than a traditional book.

Finally, several libraries have reported logistical problems in circulating e-readers.

Most often, libraries have had to provide some sort of tote bag that would be large enough to hold the device itself, its accompanying battery pack, and other relevant materials such as instructions, user agreements, etc.

Readability Problems

Effective display of technical and scientific content is an area of concern for producers of e-book readers. Most publishers agree that the current crop of dedicated readers is simply not up to the task. One concern is that the resolution of on-screen displays tend to be significantly lower than that of a printed page. This is particularly problematic in dealing with content that contains color, graphics, extensive diagrams or detailed illustrations. Another drawback is the lack of a standard way of displaying equations and intense tabular material found in scientific documents. This problem will likely be addressed as the e-book industry moves towards standardization of document formats.

Bibliographic Control

One of the advantages of electronic books is that they don't need the extensive "processing" that traditional books need to prepare them for circulation. In academic libraries, however, it is still important to obtain complete bibliographic information in order to catalog the books. Nancy Gibbs, in her report on North Carolina State University's ongoing e-book experiment, addresses this issue (Gibbs, 2000). The library catalog could not be updated with records for electronic books until catalogers had viewed them, because the vendor's listing did not provide sufficient bibliographic data.

Administrative Problems

The electronic book format raises a number of questions regarding copyright, fair use, intellectual property and digital rights. In incorporating e-books into an academic library collection, library staff will face problems related to archiving, network applications, product support and updates, interfaces, and license agreements. In acquiring electronic books, it is necessary to address issues regarding space and equipment requirements, impact on other resources and services, and vendor and technical support. Collection management will inevitably become a far more intricate process.

Conclusion

Most academic libraries have had some degree of success with web based resources and electronic journals. In these instances e-books will integrate easily into the infrastructure.

Advances in high resolution screen technology and improved software display will inevitably improve the readability of electronic books. Emerging generations of

e-book readers will have features which will considerably improve their readability - built-in electronic dictionaries and on screen note-pads, the ability the highlight passages

of text, the option to change the orientation of the display by rotating the screen contents (a useful option for left handed readers). The electronic book format has tremendous possibilities for the distance education arena. As the traditional university becomes the virtual university, scholars will access a virtual library of electronic resources.

Further information on Electronic Books

Electronic Book Evaluation Project

The overall goal of the LSTA-funded **Electronic Book Evaluation Project** is to evaluate the uses and feasibility of electronic books in various types of libraries. Year 1 (October 1999 - September 2000) focused on portable, dedicated electronic book devices, included the Rocket eBook and SoftBook Readers. During Year 2 (October 2000 - September 2001), we are continuing to evaluation ebook technologies, such as audio ebooks and new ebook devices, by placing them in area academic, public and school libraries. In addition, the project members will focus on disseminating the information we have learned and finding means by which to educate the ebook industry about the unique needs of libraries. This project is supported by Federal Library Services and Technology Act funds, awarded to The New York State Library by the Federal Institute of Museum and Library Services.
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e-ink http://www.eink.com/sp_ _h.htm This web site illustrates how electric ink will work. Although the technology to extend this to paper is about 10 years in the future, e-ink is now being used in signs and posters.

Electronic paper http://www.parc.xerox.com/dhl/projects/gyricon/ Electronic paper utitlizes a new display technology called "gyricon" and it falls somewhere between paper and a computer screen. Like paper, it is user-friendly, thin, lightweight, and flexible. But like a computer display, it is also dynamic and rewritable. "Xerox PARC and 3M to Collaborate on Electronic Paper" in *Information Today* 16 no8 35+ s 1999.

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